

WHAT IS CLAIMED IS:

1. A system for secure communication, comprising:
a random value generator configured to generate a
random value;

5 a message validation code generator coupled to the
random value generator and configured to generate a message
validation code based on a predetermined key, a message, and
the random value;

10 a one-time pad generator coupled to the random number
generator and configured to generate a one-time pad based on
the random value and the predetermined key; and

a masked message generator coupled to the one-time pad
generator and configured to generate a masked message based
on the one-time pad and the message.

15 2. The system as recited in claim 1, wherein the
message validation code generator employs a first one-way
hash function.

20 3. The system as recited in claim 2, wherein the one-
time pad generator employs the first one-way hash function.

25 4. The system as recited in claim 1, wherein the
message validation code generator employs a first one-way
hash function and the one-time pad generator employs a
second one-way hash function.

30 5. The system as recited in claim 1, further
comprising a protected message envelope generator coupled to
the random value generator, the message validation code
generator, and the masked message generator, and configured
to generate a protected message envelope based on the random
value, the message validation code, and the masked message.

6. The system as recited in claim 5, further comprising a transmitter coupled to the protected message envelope generator and configured to transmit the protected message envelope to a target.

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7. A system for secure communication, comprising:
a protected message envelope reader configured to receive a protected message envelope and generate a random value, a masked message, and a first message validation code
10 based on the received protected message envelope;

a one-time pad generator coupled to the protected message envelope reader and configured to generate a one-time pad based on the random value and a predetermined key;
and

15 a message unmasker coupled to the one-time pad generator and protected message envelope reader, and configured to generate an unmasked message based on the one-time pad and the masked message.

20 8. The system as recited in claim 7, wherein the one-time pad generator employs a first one-way hash function.

9. The system as recited in claim 7, further comprising a validation module coupled to the protected
25 message envelope reader and the message unmasker, the validation module comprising:

a message validation code generator configured to generate a second message validation code based on the predetermined key, the unmasked message, and the random
30 value; and

a message validation code comparator coupled to the protected message envelope reader and the message validation code generator and configured to generate a validation based

on the first message validation code and the second message validation code.

5 10. The system as recited in claim 9, wherein the validation module employs a first one-way hash function.

10 11. The system as recited in claim 9, wherein the validation module employs a first one-way hash function and the one-time pad generator employs a second one-way hash function.

15 12. A method for secure communication, comprising:
generating a random value;
generating a message validation code based on a
message, the random value, a predetermined key, and a first
one-way hash function;
generating a one-time pad based on the random value,
the predetermined key, and a second one-way hash function;
and
20 generating a masked message based on the message and the one-time pad.

25 13. The method as recited in claim 12, further comprising generating a protected message envelope based on the random value, the masked message, and the message validation code.

30 14. The method as recited in claim 13, further comprising transmitting the protected message envelope to a target destination.

15. The method as recited in claim 12, wherein the first one-way hash function and the second one-way hash

function are the same one-way hash function.

16. A secure message generated by the method of claim
12.

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17. A secure message generated by the method of claim
13.

18. A method for secure communication, comprising:
10 receiving a random value, a masked message, and a first
message validation code;

generating a one-time pad based on the random value, a
predetermined key, and a first one-way hash function; and

15 generating an unmasked message based on the one-time
pad and the masked message.

19. The method as recited in claim 18, further
comprising:

20 generating a second message validation code based on
the unmasked message, the random value, the predetermined
key and a second one-way hash function; and

comparing the first message validation code to the
second message validation code to determine a validity of
the unmasked message.

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20. The method as recited in claim 19, wherein the
first one-way hash function and the second one-way hash
function are the same one-way hash function.

30 21. The system of claim 18, further comprising:
receiving a protected message envelope; and
generating a random value, a masked message, and a
first message validation code based on the received

protected message envelope.

22. A computer program product for secure communications, the computer program product having a medium
5 with a computer program embedded thereon, the computer program comprising:

computer code for generating a random value;

computer code for generating a message validation code
based on a message to be sent, the random value, a
10 predetermined key, and a first one-way hash function;

computer code for generating a one-time pad based on
the random value, the predetermined key, and a second one-
way hash function;

computer code for generating a masked message based on
15 the message to be sent and the one-time pad; and

computer code for generating a protected message
envelope based on the random value, the masked message, and
the message validation code.

20 23. A computer program product for secure communications, the computer program product having a medium with a computer program embedded thereon, the computer program comprising:

computer code for receiving a protected message
25 envelope;

computer code for generating a random value, a masked
message, and a first message validation code based on the
protected message envelope;

computer code for generating a one-time pad based on
30 the random value, a predetermined key, and a first one-way
hash function;

computer code for generating an unmasked message based
on the one-time pad and the masked message;

computer code for generating a second message validation code based on the unmasked message, the random value, the predetermined key, and a second one-way hash function; and

- 5 computer code for comparing the first message validation code to the second message validation code to determine a validity of the unmasked message.